



MARSHALL STAR

Serving the Marshall Space Flight Center Community

May 7, 2009

NASA awards contract for support at Michoud Assembly Facility

By Amie Cotton

NASA has selected Jacobs Technology of Tullahoma, Tenn., to receive the manufacturing support and facilities operations contract at the Michoud Assembly Facility in New Orleans.

This is a cost-plus award fee, indefinite delivery, indefinite quantity contract with a three-year base period of performance beginning May 1, 2009, and two, one-year options. The contract value is \$120.49 million for the base period, \$40.11 million for option year one and \$42.16 million for option year two. Under the terms of the contract, Jacobs Technology will manage the Michoud facility and provide support to its multiple NASA projects and other tenants.

Michoud, a NASA-owned facility, is one of the world's largest manufacturing plants. The Marshall Center manages it.

"This contract award marks a new era of management and collaborative manufacturing work at Michoud," said

See Contract on page 5

NASA to announce 2010 budget May 7; Marshall Center to hold all-hands meeting

NASA Associate Administrator Christopher Scolese will present the agency's fiscal year 2010 budget proposal in a briefing Thursday, May 7, at 1:30 p.m. CDT. Immediately following, Marshall Space Flight Center Acting Director Robert Lightfoot will hold an all-hands meeting in Activities Building 4316.

Marshall Center team members may watch the presentation in Morris Auditorium or on their desktops live via NASA TV. Lightfoot will take questions from team members during the all-hands. A summary of the NASA budget is expected to be available later on May 7 at <http://www.nasa.gov/budget>.

Call Marshall Center's Information Line for center status

Marshall Space Flight Center managers are continuing to take appropriate precautions to ensure the safety and well being of all Marshall team members and their families in the wake of the identification of the H1N1 virus, commonly known as swine flu.

Team members may call the Marshall Information Line at 544-HELP, option 5, for Marshall-related announcements, including center delays or closures. Center employees residing outside the local calling area may access the Information Line toll-free at 1-888-CHK-MSFC, or 1-888-245-6732. Local radio and TV stations and newspapers also may announce delayed Marshall openings and closures.

For more information about the H1N1 virus, please visit http://inside.msfc.nasa.gov/er/swine_flu_info.html.



Aerial view of the Michoud Assembly Facility

Space shuttle Atlantis set to launch May 11

By *Sanda Martel*

NASA has set May 11 as the launch date for space shuttle Atlantis' STS-125 mission to upgrade NASA's Hubble Space Telescope. Commander Scott Altman and his six crewmates are scheduled to lift off at 1:01 p.m. CDT from NASA's Kennedy Space Center, Fla.

The launch date was announced following an April 30 Flight Readiness Review – the traditional meeting during which top NASA and contractor managers assess the risks associated with a space shuttle mission. They determined that the shuttle's equipment, support systems and procedures are ready for flight.

"We had a very thorough review," said Bill Gerstenmaier, NASA's associate administrator for Space Operations. "The fact that it was a shorter meeting than usual is a tribute to how well the processing has gone and the few problems with the last flight."

"This flight is a bit different from others, with five back-to-back spacewalks," Gerstenmaier said. "The teams are ready to go do what they need

to do, and the vehicles look like they are in good shape."

Space Shuttle Program Manager John Shannon echoed that assessment, saying it was a "very smooth FRR ... could not have gone any smoother." He added there were no dissenting opinions and no major topics of debate.

Atlantis' 11-day mission will include spacewalks to refurbish Hubble with state-of-the-art science instruments. After the repair mission, the telescope's capabilities will be expanded and its lifetime extended through at least 2014.

The shuttle commander, Altman, will be joined on the mission by Pilot Gregory Johnson and Mission Specialists Andrew Feustel, Michael Good, John Grunsfeld, Megan McArthur and Mike Massimino. Grunsfeld, Feustel, Massimino and Good will spend a combined total of 31 hours and 40 minutes working outside Atlantis on flight days four, five, six, seven and eight.

STS-125 will be the fifth and final servicing mission to Hubble. Previous servicing missions included SM-1,

conducted during STS-61 in December 1993; SM-2 during the STS-82 mission in February 1997; SM-3A, conducted during STS-103 in December 1999; and SM-3B, conducted during STS-109 in March 2002.

Space shuttle Endeavour is being prepared as a backup vehicle in the unlikely event that a rescue mission is necessary for Atlantis. Unlike crews bound for the International Space Station, Atlantis astronauts cannot seek safe haven aboard the lab complex because Hubble and the space station are in different orbits. After Endeavour is cleared from its duty as a rescue spacecraft, it will be moved to Launch Pad 39A at the Kennedy Center for its targeted June 13 launch on the STS-127 mission to the space station.

For more information about the STS-125 crew and its mission, visit <http://www.nasa.gov/shuttle>.

For more information about the Hubble Space Telescope, visit <http://www.nasa.gov/hubble>.

Martel, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.



Marshall engineer honored by National Defense Industrial Association

The Marshall Space Flight Center's James Richard, center, recently received the Tennessee Valley Chapter of the National Defense Industrial Association's Technology Award. Richard, an engineer in the Engineering Directorate's Propulsion Systems Department, was recognized for his accomplishments and contributions to the local defense industrial base. The award was presented April 20 by Lt. Gen. Larry Farrell, left, president of the National Defense Industrial Association and Ed Stone, right, president of the organization's Tennessee Valley Chapter. The National Defense Industrial Association, based in Arlington, Va., is a leading defense industry association promoting national security.

Marshall's SPOrT Center puts the 'right stuff' in the right hands

By Dauna Coulter

Thanks to the Marshall Space Flight Center's Short-term Prediction Research and Transition, or SPOrT, North Alabama weather forecasters are ready for anything nature sends their way.

Huntsville's National Weather Service office and SPOrT are located at the National Space Science and Technology Center near the University of Alabama in Huntsville campus. This co-location makes possible a unique collaboration through which SPOrT puts state-of-the-art NASA satellite weather data directly into forecasters' hands.

"It's not just a matter of SPOrT throwing random data sets over the fence to us, and hoping we might be able to use them," said Chris Darden, science operations officer at the National Weather Service office in Huntsville. "The SPOrT team works with us to figure out what we need. Then they put that data into a format we can read, actually integrating it with our radar displays. And they train us to understand and interpret the information."

Dr. Gary Jedlovec, SPOrT principal investigator, explained: "We're all in this together and the public is the ultimate winner. Adding our data to National Weather Service models helps forecasters give the community accurate advanced warnings."

For example, Jedlovec said SPOrT gives forecasters several tools to help predict a thunderstorm's potential for spawning a monster tornado. One of the best tools is the North Alabama Lightning Mapping Array – an 11-sensor network that measures lightning around the area.

Think of how your radio crackles noisily when lightning flashes. That's because lightning produces a lot of radio frequency radiation. By zeroing in on an unused frequency, the 11

sensors – which are scattered around on water towers, radio towers and rooftops in northern Alabama and southern Tennessee – measure a storm's total lightning. Total lightning includes both cloud-to-ground and intercloud discharges.

"The lightning data can help forecasters predict whether a storm might generate a tornado," said Rich Blakeslee, a Marshall atmospheric scientist. "We've found that often intercloud lightning – not cloud-to-ground lightning – suddenly spikes and then, just as suddenly, diminishes a very few minutes before a tornado forms."

The high-tech lightning sensors collect data every two minutes and send it to the National Weather Service office. "Our data can be the little additional piece of information that helps decide whether to issue a warning," said Blakeslee.

Severe weather researchers and meteorologists at the National Space Science and Technology Center also have access to another tool – a Dual-Polarimetric Doppler Radar – that can actually reveal the shapes of raindrops.

"Bigger raindrops are fatter and wider; the larger the raindrop is, the flatter it gets as it falls," explained Walt Petersen, a Marshall physical scientist. "That information helps weather forecasters better estimate rainfall amounts to predict flash flooding and storm intensity."

This radar can also differentiate between rain and hail because hail is typically spherical while raindrops tend to flatten. Adding this information to the strength of the signal return, forecasters can calculate the size of the hail. That comes in handy for assessing storm severity.

"Large hail indicates powerful updraft and downdraft winds within a thunderstorm," Petersen said. "It usually

means a strong storm, and sometimes means that a storm may produce a tornado."

Darden and the National Weather Service are glad to have access to data from the unique radar. "It allows us to evaluate a lot more information about a potentially violent storm," he said. "It's pretty new, so we still have a lot to learn about using it."

NASA scientists at the National Space Science and Technology Center train not only current forecasters but also future meteorologists to use these tools. The UAHuntsville Atmospheric Science Department, like the National Weather Service office in Huntsville, is collocated with NASA researchers.

"During severe weather, day or night, my students gather here to operate the radar, and other students come in to help them coordinate the operations," said Petersen. "You should see them. It's weather central here sometimes."

"This is an exciting place to work," said Jedlovec. "All tornado warnings for Madison County come right out of this building. We don't just write research papers. With the help of the National Weather Service, we see our data used for the good of the public. That makes us feel good about what we do."

Coulter, a Schafer Corp. employee, supports the Office of Strategic Analysis & Communications.



Kevin Fuell, standing, a Short-term Prediction Research and Transition Center researcher/liaison, and Stephen Latimer, a National Weather Service forecaster, view weather data on a weather service display at the National Space Science and Technology Center.

Golf tournament May 14 to benefit Marshall Association scholarships

The Marshall Association and the Marshall Space Flight Center's NASA Exchange Council will co-sponsor a golf tournament May 14 at The Links on Goss Road on Redstone Arsenal. The tournament is open to everyone.

Registration will begin at 8 a.m. with tee time at 9 a.m. The \$45 cost includes green fees, golf cart rental and lunch at

the Weeden Mountain Grill on Weeden Mountain Road in Building 1500.

Proceeds from the tournament will support Marshall Association scholarships. The organization grants two scholarships annually to college-bound children of Marshall Association members. For more information about the

scholarships, visit http://inside.msfc.nasa.gov/announcements/2009_ma-scholarship-call.html.

For more information about the golf tournament, visit http://inside.msfc.nasa.gov/marshall_association/index.html or call James Bailey, chairman of the tournament committee, at 544-7409.

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue, May 14, is 4:30 p.m. Thursday, May 7.

Miscellaneous

Workshop countertop, 31"x64"x3/8" glass top, 1/2" plywood base, \$30 both. 655-6348

MTD Yard Man lawn edger, \$25. 882-2654

Sherwood RV-1340 stereo receiver, \$40; Akai AA-R22 receiver, \$30; Fisher RS-9105 receiver, \$20. 682-8692

32" Toshiba flat screen HDTV, model #32HF73, \$350 obo. 880-3737

Two tickets, Gordon Lightfoot concert, VBC, May 13, orchestra section, \$130 pair. 651-8264

KitchenAid 30" slide-in range, dishwasher, microwave, side-by-side refrigerator, bisque, \$400 obo. 426-1784

Paradigm stereo speakers, Studio 20 Reference series, built-in amplifiers, professional grade audio, \$725. 352-514-8405

Trailer, 6" by 12", 15" tires, gate ramp, \$600. 652-1495

KitchenAid refrigerator, French-door style, manufacturer's warranty, \$2,000. 571-3622

Small used white kitchen stove/oven, holiday brand, \$45; microwave oven, \$25. 655-2820

Antique white Queen Ann sofa, \$700. 722-5282 after 5 p.m.

Ashley Furniture coffee table, four glass panels, wood, \$80-\$100. 652-6233

Air elliptical, \$75. 832-978-7128

Jamison queen mattress set, frame, \$300. 536-5132

Trailer for 22' pontoon, swing-away tongue, loading bunks,

LED lights, tandem axle brakes, \$2,200. 509-2524

Lane five-piece dark brown leather sectional sofa, chaise lounge, \$2,000. 348-8316

Craftsman lawnmower, self-propelled, key start, \$100; Black & Decker electric blower, assorted lawn tools. 882-3983

Twin mattress and box springs; Homelite weedeater, muffler has become detached, make offer for each. 655-6701

Broyhill white kitchen hutch, glass sides/doors/shelves, \$300; five-piece white indoor wicker set, \$350. 975-1667

Entertainment center, \$25; TV stand, \$20, more. 461-7520

Sears X-Cargo roof carrier, white, \$40. 721-0617

Shoreport floating Jet Ski lift, slurry pole fixtures for fixed-docks, \$750. 714-4651

Vehicles

2008 Blue Honda Accord Coupe EXL, V6, loaded, leather, ground effects, multi-CD/XM/iPod, 10k miles, \$24,900. 604-9951

2008 Gold Wing, red, premium audio, fog lights, extras, 1,300 miles, \$15,950. 859-0729

2007 Sidney Outback 28' Fifth Wheel Camper, \$20,500. 679-2410

2006 VW Jetta TDI, five speed, alloy wheels, new tires, 76k miles, \$15,000. 931-993-7768

2006 2WD Dodge Quad Cab, Hemi, tow package, 60k miles, \$15,250. 527-6655

2006 Mini Cooper S, hyper blue, white stripes, dual sunroof, 17,250 miles, \$19,750. 714-3742

2005 Ford Five Hundred sedan, leather, moon roof, fully loaded, 44k miles, \$12,500. 975-1667

2004 Z71 Chevrolet extended cab, 83k miles, \$18,250. 509-3208

2002 Fifth Wheel camper, sleeps eight, many amenities, 13,990. 721-1260

2002 Kawasaki four wheeler, 250cc, 2WD, red, \$2,000. 431-5950

2001 Pontiac Montana, seats eight, six seats fold down flat, 130k miles, \$3,495. 233-0607

2000 Mercedes Benz ML430 SUV, white, leather, navigation, sunroof, CD changer, Bose, \$7,495 obo. 520-2802

1999 Bayliner, \$8,800. 497-8766

1998 Toyota Camry XLE, V6, leather, sunroof, CD, alloy wheels, \$3,400. 426-4755

1997 Mazda Millenia, loaded, \$3,500. 881-1252

1996 Mazda Miata M-Edition, five speed, new Bilstein shocks/timing belt/water pump, 117k miles, \$5,250. 714-1941

1993 Acura Integra, 133k miles, \$2,195. 508-5416

1992 Lincoln Town Car, 92k miles, \$2,500. 881-8970

1986 Jeep CJ7, 4.2, four speed (T176), \$6,500. 617-1089

Wanted

Medium to large patio set with umbrella. 288-6797

Houses/offices to clean, available evenings and weekends. 777-8595

Quality interior and exterior painting, small and large projects, free estimates. 509-3328

Four premium tickets for the May 16 Sugarland concert. 325-3633

Thomas the Train table and/or accessories. 518-9900

Free

Gourmet horse manure, bring truck, will load, near Tim's Ford Dam. 931-307-9436

Bullador puppy, only for someone who will not put him on chain. 961-1865

Registered 2-year-old female Doberman Pincher, tail docked, ears not docked, papers available. 535-4498 or 288-6224

Six landscape railroad ties, you pick up. 527-7115

Found

Philips stereo sound stage (speaker dock for iPod), April 29, Charlie's Grill, Building 4200. 544-4680

Quarterly review brings NASA closer to first Orion vehicle test



Constellation Program team members from the Orion Project, managed at the Johnson Space Center in Houston, gathered at the Marshall Space Flight Center for a three-day quarterly review April 28-30. The Orion crew module will ferry crews to and from the International Space Station, return humans to the moon and prepare for future voyages to other destinations in the solar system. The review covered the status of all Orion elements, including the crew module, service module, launch abort system and supporting engineering functions. Each review brings NASA closer to the first integrated test of the Orion vehicle, which is slated for late fall. For the test, also called the Pad Abort 1 test, the abort motor will fire, lifting Orion to an altitude of about one mile.

Marshall to celebrate Asian Pacific American Heritage month

The Marshall Space Flight Center and Team Redstone will host a series of events in May – Asian Pacific American Heritage month – celebrating the contributions of people of Asian and Pacific Islander heritage benefiting

NASA and the nation.

Artist Caroline Wang, an aerospace engineer in Marshall's Safety & Mission Assurance Directorate, will present a Lunch and Learn session on "Cultural Diversity in Art" May 14 at 11 a.m. in

Building 4200, Room P110. For more information, call Wang at 544-3887.

Additional Marshall Center and Team Redstone events are being planned. Watch Inside Marshall for details.

Contract *Continued from page 1*

Shelia Cloud, Michoud transition manager. "Michoud has a rich history of providing manufacturing expertise to NASA, and this new contract will enable a more NASA-centric focus at Michoud as we transition to a multi-project facility."

For 35 years, the Space Shuttle Program has manufactured and built the external

fuel tank at Michoud. Today, the facility supports several major projects for the Constellation Program, which is developing NASA's next generation of crew exploration and launch vehicles.

The Michoud facility, located on 832 acres, has more than 2.2 million square feet of manufacturing space and features state-of-the-art plant and

tooling equipment. It is one of the largest employers in Louisiana with more than 3,900 employees on-site.

For more information about the Michoud Assembly Facility, visit <http://www.nasa.gov/centers/marshall/michoud>.

Cotton, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.



External tank ET-132 is loaded on the covered barge Pegasus at NASA's Michoud Assembly in New Orleans on May 1.

First external tank built using friction stir welding ships from Michoud

By Sanda Martel

ET-132, the first space shuttle external tank to be partially built using the friction stir welding technique, began its journey May 1 from NASA's Michoud Assembly Facility in New Orleans to the Kennedy Space Center, Fla.

Friction stir welding is a technique that forges a bond between two metal alloys without melting the metal. The resulting weld joints are more efficient, more reliable and can maintain higher material properties than conventional welding.

The tank was loaded onto the covered barge Pegasus in New Orleans to begin its six-day, 900-mile journey to the Kennedy Space Center. It is expected to arrive May 7, where it will be joined with solid rocket boosters and space shuttle Discovery to embark on the STS-128 mission in August.

ET-132 was built by Lockheed Martin at Michoud and is the 128th flight tank that the company has assembled for NASA's Space Shuttle Program.

Martel, an AI Signal Research Inc., employee, supports the Office of Strategic Analysis & Communications.

Marshall to transition to new telephone voicemail system this summer

Beginning this summer, the Marshall Space Flight Center will transition to a new telephone voicemail system.

Details are being finalized. Additional information – including specific transition dates and contact numbers to call for questions – will be published in the Marshall Star and Inside Marshall as details become available.



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